A source term estimation method for a nuclear accident using atmospheric dispersion models - DTU Orbit (09/11/2017)

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The objective of this study is to develop an operational source term estimation (STE) method applicable for a nuclear accident like the incident that occurred at the Fukushima Dai-ichi nuclear power station in 2011. The new STE method presented here is based on data from atmospheric dispersion models and short-range observational data around the nuclear power plants.The accuracy of this method is validated with data from a wind tunnel study that involved a tracer gas release from a scaled model experiment at Tokai Daini nuclear power station in Japan. We then use the methodology developed and validated through the effort described in this manuscript to estimate the release rate of radioactive material from the Fukushima Dai-ichi nuclear power station.

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